

PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON

A SYNOPSIS OF BIZA AND A NEW ALLIED GENUS  
(HOMOPTERA: CICADELLIDAE: NEOCOELIDIINAE)

By JAMES P. KRAMER

Entomology Research Division, Agriculture Research Service  
U. S. Department of Agriculture, Washington, D. C.

During July of 1960, I had the opportunity to study some of Francis Walker's leafhopper types in the British Museum (Natural History), London. Among the types studied was *Biza crocea* Walker, a species unknown since its description. In this paper Walker's species is redescribed, and two new species are added to the genus together with a key to males. A new genus and species of the Neocoelidiinae is included.

*Biza* Walker 1858

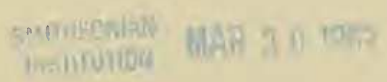
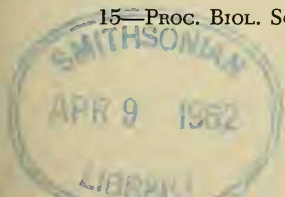
*Type of genus: Biza crocea* Walker.

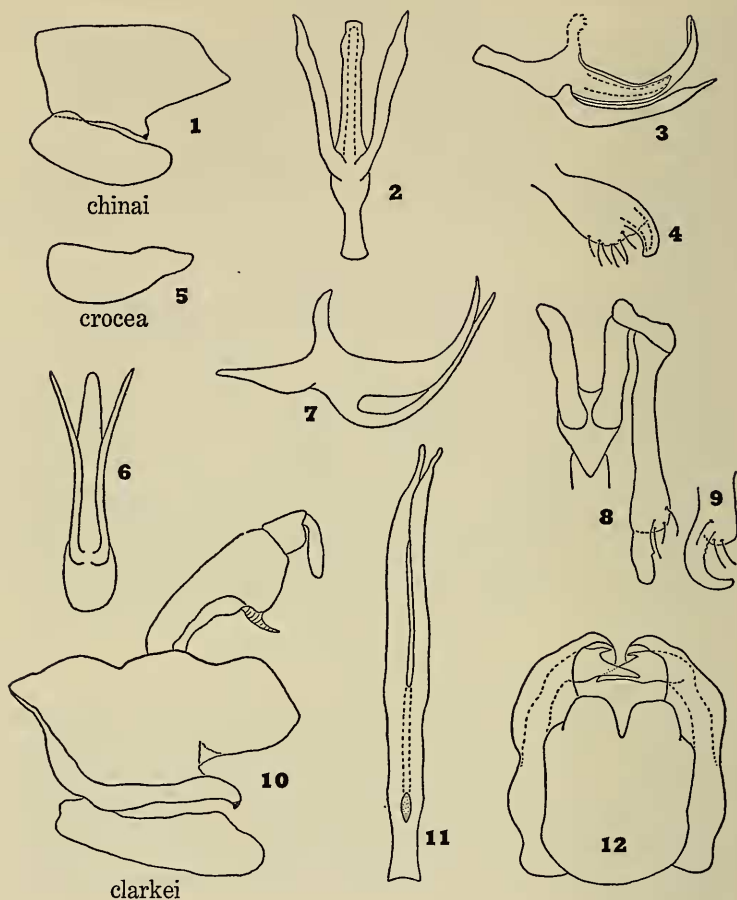
Head, including eyes, about three-fourths as wide as pronotum. Antennae at least half of body length. Crown subquadrate, much wider than long and produced beyond eyes, flat with posterior and sinuated lateral margins carinated, a very distinct carina separating face and crown. Ocelli small, marginal, one near each eye. Lateral margins of pronotum strongly carinated, posterior margin broadly but shallowly indented. Venation of forewing distinct with four apical and three subapical cells.

*Male genitalia:* Pygofer unarmed except for ventral teeth. Male plates moderately deep, valve lacking. Connective Y-shaped, clearly articulated to aedeagus. Style with one well-developed apical lobe. Aedeagus a simple recurved shaft with or without paired basal appendages.

Coloration in known species yellow to orange with brown or fuscous marking on the forewings.

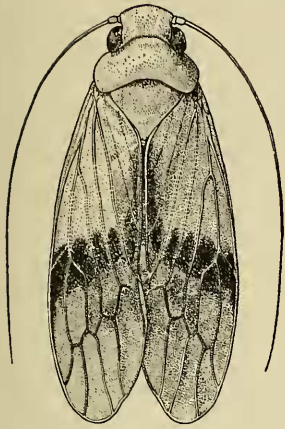
Species appear broad and somewhat flattened with a cercopid-like habitus (Fig. 13). On the basis of male genitalia, *Biza* Walker (1858: 231) and *Megacoelidia* Kramer and Linnavuori (1959, Proc. Biol. Soc. Wash. 72: 55-58) appear to be related, although they are distinct genera. Both lack a valve and have but one well-defined apical lobe of the style, the basal portion of the aedeagus prolonged, and the male plates fused at their bases. They differ considerably in length of body:





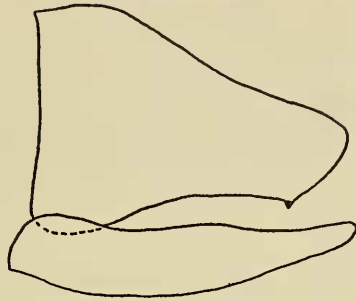
FIGS. 1-4. *Biza chinai*: 1.—Lateral view of pygofer and male plate. 2.—Ventral view of aedeagus. 3.—Lateral view of aedeagus. 4.—Distal portion of style in lateral view. FIGS. 5-7. *Biza crocea*: 5.—Lateral view of male plate. 6.—Ventral view of aedeagus. 7.—Lateral view of aedeagus. FIGS. 8-12. *Tichocoelidia clarkei*: 8.—Dorsal view of connective and style. 9.—Distal portion of style in lateral view. 10.—Lateral view of entire genital capsule. 11.—Dorsal view of aedeagus. 12.—Ventral view of genital capsule.

*Biza* is 7-8 mm, whereas *Megacoelidia* is 13 mm. The crown is flat in *Biza* and distinctly concave in *Megacoelidia*. All-over size and the condition of the crown will readily separate the two genera.

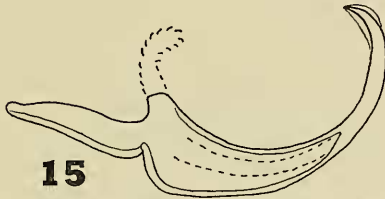


*Biza craspa*

13



14



15

Figs. 13-15. *Biza craspa*: 13.—Habitus shown dorsally. 14.—Lateral view of pygofer and male plate. 15.—Lateral view of aedeagus. (All drawings made from types.)

BIZA: KEY TO MALES

1. Aedeagus with paired basal processes (Fig. 3), pygofer in lateral view pointed apically (Fig. 1) ..... 2  
 Aedeagus without paired basal processes (Fig. 15), pygofer in lateral view rounded apically (Fig. 14) ..... *craspa*, new species
2. Aedeagal processes uniformly slender (Fig. 6), curvature approximately that of the aedeagus (Fig. 7) ..... *crocea* Walker  
 Aedeagal processes moderately stout (Fig. 2), curvature not like that of the aedeagus (Fig. 3) ..... *chinai*, new species

*Biza crocea* Walker

*Biza crocea* Walker 1858. Supplement. List of specimens of homopterous insects in the collection of the British Museum 1858: 253.

Length: 7-8 mm.

Coloration: Ground color pale yellow to yellow. Venter, legs, face, crown, pronotum, and scutellum unmarked. Each forewing marked as follows: Brown spot in center of clavus; spot variable in size, may reach claval commissure; distal portion of wing smoky brown, darker brown transverse band across anteapical cells separating distal smoky brown apex from basal yellow portion; combined widths of smoky brown apical coloration and of transverse brown band variable, sometimes occupying half of wing.

*Male genitalia:* Pygofer in lateral view pointed apically with a large tooth at about middle of ventral margin, plates shorter than pygofer and somewhat narrowed distally (Fig. 5). Aedeagus with a pair of slender, recurved basal appendages (Figs. 6-7).

*Specimens:* This species is known from three syntypes, one male and two females, in the British Museum. The male specimen with data Villa Nova, Pará, Brazil, is hereby selected as the lectotype. The illustrations of the male genitalia were prepared from sketches made by Dr. W. E. China of the British Museum (Nat. Hist.). One of the females bears the same data as the lectotype male, whereas the second female is labeled Tapayos, Pará, Brazil.

#### ***Biza chinai*, new species**

*Length:* 8 mm.

*Coloration:* Indistinguishable from *crocea*.

*Male genitalia:* Pygofer as in *crocea*, male plates short and stout (Fig. 1). Aedeagus with a pair of moderately stout basal appendages which are slightly expanded preapically (Figs. 2 and 3).

*Specimens:* Holotype male, Pará, Brazil, U. S. National Museum type No. 65693. Female unknown. This species is named for W. E. China, who has been most helpful in this and other leafhopper studies.

#### ***Biza craspa*, new species**

*Length:* 7.25-8 mm.

*Coloration:* Ground color pale yellow to orange; venter, legs, face, crown, pronotum, and scutellum unmarked. Forewings marked as in *crocea* except as follows: no brown spot in clavus, but claval commissure lightly brown or pale yellow to orange. Like *crocea* the smoky brown apical coloration and transverse brown band are highly variable. In one of the specimens at hand the brown area covers eighty per cent of the forewing including all of the clavus.

*Male genitalia:* Pygofer in lateral view rounded apically with a small tooth on the distal portion of the ventral margin, plates as long as pygofer and slender (Fig. 14). Aedeagus a simple recurved shaft without appendages (Fig. 15).

*Specimens:* Holotype male, Costa Rica, Pablo Schild. U. S. National Museum type No. 65666. Paratypes, three males; one, same data as type; one Teapa, Tabasco, Mexico; and one Volcán de Chiriquí, Panama. Female unknown.

#### ***Tichocoelidia*, new genus**

*Type of genus:* *Tichocoelidia clarkei*, new species.

This new genus will trace to *Coelidiana* in DeLong's key to genera (1953. *Lloydia* 16 (2): 94-95). It may be distinguished from *Coelidiana* on the basis of the asymmetrical aedeagus and the crossed paired processes within the male genital capsule.

Head, including eyes, slightly less than four-fifths as wide as pronotum. Crown pentagonal, produced beyond eyes. Antennae more than half

body length. Crown concave with all margins strongly carinated. Ocelli small, marginal, one near each eye. Lateral margin of pronotum carinated, posterior margin mesally indented. Venation of forewings distinct, with four apical and three subapical cells.

*Male genitalia:* Pygofer with hooked ventral process. Anal tube with hooks. Male plates solidly fused basally with valve lacking. Crossed paired processes within genital capsule. Aedeagus asymmetrical.

***Tichocoelidia clarkei*, new species**

*Length:* 7.5–8 mm.

*Coloration:* Ground color tan. Marked as follows: venter of thorax between prothoracic and mesothoracic legs brown, with a weakly defined mesal ivory stripe; sides of thorax largely ivory; anterior carina of crown brown, with a distinct black spot at middle; scutellum with three broad, weakly defined longitudinal brown stripes, lateral margins marked with ivory basally. Forewings tan hyaline with veins brown in clavus and at apex.

*Male genitalia:* Genital capsule in lateral view (Fig. 10), anal tube with a pair of small but distinct ventral hooks (only one visible laterally), pygofer with dorsal margin irregular and hooked process on ventral margin, male plate shorter than pygofer. Genital capsule in ventral view (Fig. 12), male plates fused for most of their length, valve lacking, with a pair of internal twice-pointed crossed processes distally. Connective approximately Y-shaped, style long and slender with one apical lobe (Fig. 8). Aedeagus long slender and asymmetrical in both lateral and dorsal views, cleft for over one-half its length, gonopore opening at base of cleft (Fig. 11). Aedeagus and connective fused but the joint is flexible.

*Specimens:* Holotype, male, Colombia, Cundinamarca, Rio Sumapaz Gorge, East of Melgar, 5 January 1959, J. F. G. Clarke. U. S. National Museum type No. 65673. One paratype male with same data. Female unknown.